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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,459	11/07/2001	Donald Bruns	1092-PA435	2068

  

49548	7590	12/18/2006
TREX ENTERPRISES CORP.		
10455 PACIFIC COURT		
SAN DIEGO, CA 92121		

  

EXAMINER	
TRA, TUYEN Q	

  

ART UNIT	PAPER NUMBER
2873	

  

MAIL DATE	DELIVERY MODE
12/18/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.



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## CORRECTED NOTICE OF ALLOWANCE AND FEE(S) DUE

49548 7590 12/19/2006

TREX ENTERPRISES CORP.  
10455 PACIFIC COURT  
SAN DIEGO, CA 92121

EXAMINER

TRA, TUYEN Q

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10/045,459	11/07/2001	Donald Bruns	1092-PA435	2068

TITLE OF INVENTION: OPTICALLY ADDRESSED MEMS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	03/19/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**  
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**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

49548 7590 12/19/2006

TREX ENTERPRISES CORP.  
 10455 PACIFIC COURT  
 SAN DIEGO, CA 92121

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,459	11/07/2001	Donald Bruns	1092-PA435	2068

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nonprovisional	YES	\$700	\$300	\$0	\$1000	03/19/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
TRA, TUYEN Q	2873	359-299000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/045,459	11/07/2001	Donald Bruns	1092-PA435	2068
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TREX ENTERPRISES CORP. 10455 PACIFIC COURT SAN DIEGO, CA 92121			TRA, TUYEN Q	
			ART UNIT	PAPER NUMBER
			2873	
DATE MAILED: 12/19/2006				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three-months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**DETAILED ACTION**

***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with John Ross on May 31, 2006.
3. The application's claim has been amended as follows:
  - Claim 1-10, 22-27 and 35 are canceled.

***Reason For Allowance***

4. Claims 11-21 and 28-34 are allowed.
5. Following is an examiner's statement of reasons for allowance:

The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claim(s), in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 11, 16, 28 and 30, which include (claim 11) method for directing an optical control beam onto the optical sensor, wherein the optical sensor determines optical characteristics of the optical control beam; responsively supplying voltage to the rotatable mirror, wherein an amount of the supplied voltage is based on the determined optical characteristics of the optical control beam; and rotating the rotatable mirror about a primary axis in response to the supplied

Art Unit: 2873

voltage to the rotatable mirror; (claim 16) step for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; responsively supplying voltage to a rotatable mirror that is associated with the first and second optical sensors, wherein an amount of the supplied voltage is based on the respectively determined optical characteristics of the first and second optical control beams; and rotating the rotatable mirror that is associated with the first and second optical sensors about a primary and secondary axes in response to voltage respectively supplied by the first and second optical sensors; (claim 28) an optical controller for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; and a voltage controller that is configured with the optical sensor, wherein the voltage controller responsively supplies voltage to the rotatable mirror based on the respectively determined optical characteristics of the first and second optical control beams, causing the rotatable mirror to rotate about the primary and secondary axes; (claim 30) an optical controller for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; and a separate voltage controller that is configured with each of the plurality of associated optical sensors, wherein the separate voltage controller responsively supplies voltage to an associated rotatable mirror based on the

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respectively determined optical characteristics of the first and second optical control beams, causing the rotatable mirror to rotate about the primary and secondary axes.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bowers et al. (US Patent 6,643,425 B1) discloses a switch having switch mirror arrays controlled by scanning beams with teaching of a scanning control beam used to scan across the control elements (202), which provides selectively drive voltage for electrodes (202), based on a received scanning control beam, via connection (210) in creating electrostatic actuation to move gimbaled mirror (206); however, Bowers et al. does not teach or fairly suggest an optical controller for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; and a voltage controller that is configured with the optical sensor, wherein the voltage controller responsively supplies voltage to the rotatable mirror based on the respectively determined optical characteristics of the first and second optical control beams, causing the rotatable mirror to rotate about the primary and secondary axes.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343.

The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L Mack, can be reached on (571) 272 - 2333. The fax number for this Group is (571) 273-8300.

TT

May 31, 2006

  
Hung Xuan Dang  
Primary Examiner